Bradley **Kohler**

MECHATRONICS ENGINEER · 16 MONTHS OF CO-OP EXPERIENCE

Waterloo, ON, Canada

✉ studentbrad.github@gmail.com | �नstudentbrad | studentbrad

Skills

My skills include but are not limited to:

- BASH, C/C++, Python and Java
- Microcontroller and Microprocessor firmware (MATLAB/Simulink, Labview, ARM Mbed, STM32, Nordic, Qualcomm Snapdragon)
- Embedded Operating Systems (Linux, mbedOS, ChibiOS, FreeRTOS)
- PCB hardware design (Verilog HDL, NI Multisim, Eagle)
- Systems design (Maplesim, AutoCAD, SolidWorks)
- Mathematics (Maple18, NumPy, Eigen, MATLAB)

Work Experience

Northern Digital Inc. *Waterloo, Ontario*
ADVANCED RESEARCHER & FIRMWARE DEVELOPER — *May 2018 - Sept. 2019*

- Utilized problem-solving skills and successfully implemented data fusion algorithms on camera tracking 3D guidance systems.
- Using creative skills, authored new data fusion algorithms for 3D guidance systems achieving NASA level TRL4.
- Initiated the development of Python libraries for sensor data fusion visualization and statistical analysis.
- Worked collaboratively with a team to develop a C/C++ simulator for 3D guidance inertial data.
- Demonstrated adaptability by reworking/porting our platform specific C/C++ libraries to other ARM platforms.
- Responsible for professional presentations to team members, broader research and development leaders demonstrating confidence.

McMaster University *Hamilton, Ontario*
ADVANCED RESEARCHER & TEACHING ASSISTANT — *May - Dec. 2015 & May - Sept. 2017*

- Demonstrated computer skills by developing embedded C software for safety critical systems.
- Exercised good organization skills by creating software documentation for system design.
- Took on addition responsibility by preparing lessons for students and presentations for laboratories.
- Friendly/outgoing to students especially when addressing their questions/concerns.

Emnor Mechanical Inc. *Hamilton, Ontario*
SOFTWARE DEVELOPER & MECHANICAL REPAIRMAN & SHOP EMPLOYEE — *May - Sept. 2015 & May - Sept. 2016*

- Demonstrated good organization skills by developing an inventory management software for our warehouse.
- Consistently applied attention to detail in managing company payroll, invoices and purchase orders.
- Implemented technology skills by reverse engineering damaged parts and producing CAD drawings using the Faro Arm.
- Demonstrated a strong work ethic by disassembling, repairing and reassembling centrifugal pumps.

Education

McMaster University *Hamilton, Ontario*
MECHATRONICS ENGINEERING CO-OP — *Expected Graduation April 2020*

- McMaster Cumulative Grade Point Average 3.5/4.0
- McMaster Engineering Co-op Student of the Year Nominee

Projects

Atraxa *Waterloo, Ontario*
DEVELOPER — *January - Sept., 2019*

- Developed the embedded firmware including the drivers, structure and build system for the virtual reality hand remotes.
- Solved complex firmware anomalies with low-level programming knowledge.

Aquate *Hamilton, Ontario*
MCMASTER CANADA-ISRAEL STARTUP COMPETITION WINNER — *June, 2019*

- Traveled to Tel Aviv, Israel to present technologies to companies, universities and nursing homes.
- Developed numerous technologies to accurately automate patient fluid intake.

JobFunnel *Waterloo, Ontario*
DEVELOPER — *June - Sept., 2019*

- Developed webcrawling application to help find and organize job postings.
- Developing pre-trained neural network to organize job posting based on cosine similarity.